



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,004	07/23/2001	Andreas Christen	225/50206	1367

7590

06/20/2003

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300

EXAMINER

ALEJANDRO, RAYMOND

ART UNIT	PAPER NUMBER
----------	--------------

1745

DATE MAILED: 06/20/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/910,004

Applicant(s)

CHRISTEN ET AL.

Examiner

Raymond Alejandro

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,3-5 and 7 is/are rejected.
- 7) ☒ Claim(s) 2 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I (claims 1-7) in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Germany on 07/22/2000. A claim for priority under 35 U.S.C. 119(a)-(d) can be based on said application even though the United States application was filed more than twelve months thereafter. *In that, it is noted that Sunday July 22, 2001 (07/22/2001) was not an official business day of the Patent and Trademark Office (PTO), and thus, Monday July 23, 2001 (07/23/01) was, then, the next official business day of PTO.* Hence, the instant application was filed in a timely manner so as to claim the foregoing priority. *(This is only a clarifying statement).*

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 11/06/01 was considered by the examiner.

Art Unit: 1745

Oath/Declaration

5. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c). (*See the residence/post office address of the first inventor*).

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 13. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Language Suggestion

7. Claim 1 (line 11) it is suggested to recite “feeding said operating medium” instead of “feeding operating medium” so as to better reflect the intended scope of the claim. For purposes of prosecution (*and in light of the specification*), it has been interpreted the instant claims refer to the same operating medium.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 3-5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Acker et al US 2002/0122966.

The instant application is directed to a fuel cell system wherein the claimed inventive concept comprises the specific metering and feeding device responsive to a temperature. Other limitations include the specific connection of the device; the temperature comparing device; and the specific sensor.

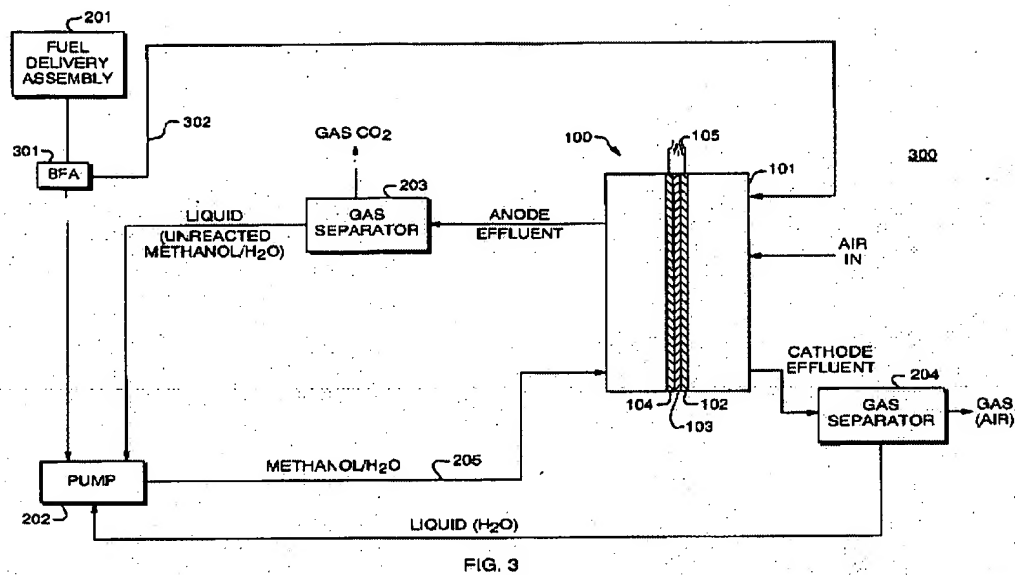
Regarding claim 1:

Acker et al disclose a fuel cell system 300, said system comprising an anode 104, a cathode 102, and a membrane electrolyte 103 disposed between the anode 104 and the cathode 102; a source of air or oxygen coupled to the cathode (*a cathode feed line for feeding oxygen-containing gas*); a source of carbonaceous fuel 201 (See CLAIM 6/ FIGURE 3). It is also disclosed that fuel cell systems use a protonically-conductive membrane (SECTION 0006).

It is evident from **Figure 3** below that the fuel cell system comprises: a) the cathode feed line for feeding oxygen-containing gas to the cathode (*represented by "air in"*); b) the cathode effluent (*the cathode exhaust-gas line*); c) the anode line for feeding (*the fuel conduit 205*) and discharging (*the anode effluent*) an operating medium to the anode-space inlet and from the

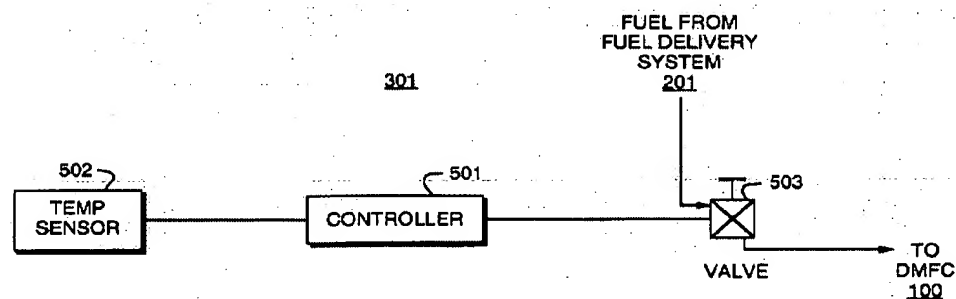
Art Unit: 1745

anode-space outlet.



It is further disclosed that the fuel cell system comprises a temperature regulation system, coupled to said source of fuel and said cathode, responsive to a temperature of said system such that when said temperature is below a predetermined temperature or temperature range, said system applies fuel directly into said cathode, thereby causing oxidation of fuel at said cathode and increasing the temperature of said system (See CLAIM 6).

Figure 5 illustrates a block diagram of the bypass fuel assembly 301 including a temperature sensor 502, a controller 501 and a bypass valve 503.



Art Unit: 1745

The sensor detects the temperature within the fuel cell and sends a signal indicative of the temperature to the controller. In response to the signal from the temperature sensor, the controller determines whether to direct fuel to the cathode via the bypass valve (SECTION 0009).

Regarding claim 3:

Figure 3 shows the BFA 301 (bypass fuel assembly) which supplies fuel to the cathode 102 through a conduit 302 (SECTION 0027) which is connected between the anode line and at least the cathode space (See FIGURE 3).

Regarding claim 4:

It is taught the system supplies fuel directly into the cathode (CLAIM 6 & ABSTRACT).

Regarding claim 5:

It is disclosed that the sensor detects the temperature within the fuel cell and sends a signal indicative of the temperature to the controller. In response to the signal from the temperature sensor, the controller determines whether to direct fuel to the cathode via the bypass valve (SECTION 0009). **Figure 9** below is a flow chart showing the method for controlling temperature. Accordingly, if the temperature is below the optimal range, controller 501 releases methanol through valve 503 (*that is, the valve is actuated*). It is disclosed that the control valve is either electrically or thermally actuated (SECTION 0012).

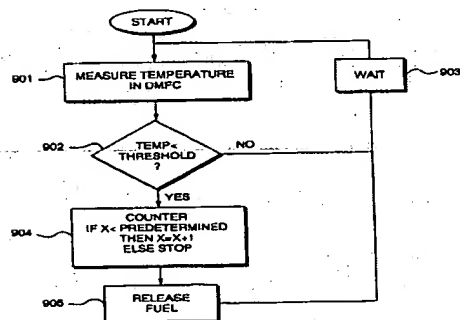


FIG. 9

Art Unit: 1745

Regarding claim 7:

It is disclosed that the fuel cell system comprises a temperature regulation system, coupled to said source of fuel and said cathode, responsive to a temperature of said system such that when said temperature is below a predetermined temperature or temperature range, said system applies fuel directly into said cathode (See CLAIM 6).

Thus, the instant claims are anticipated.

10. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Allowable Subject Matter

11. The following is a statement of reasons for the indication of allowable subject matter: a reasonable search for the prior art failed to reveal or fairly suggest what is instantly claimed, particularly: the device for metering and feeding operating medium being specifically connected to the cathode feed line as recited in claim 2; and the device for determining the temperature specifically comprising a sensor for recording one of the ambient temperature and the temperature in the interior of the anode line as recited in claim 6. For example, the prior art of record i.e. Acker et al'966 and Hornburg et al'096 do not disclose these features.

12. Claims 2 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 1745

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (703) 306-3326. The examiner can normally be reached on Monday-Thursday (8:30 am - 7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Raymond Alejandro
Examiner
Art Unit 1745

